

## REMARKS

In the Office Action the examiner has objected to Claims 1-2 and 5-7 based on identified informalities. In response, applicant has amended the claims to correct the informalities identified by the examiner.

The examiner has also rejected Claims 1-7 under 35 U.S.C. §112, first paragraph, based on a view that the application does not support claim language stating that the code reader is able to recognize the type of vehicle being tested, and the different monitor functions that are supported, without a manual setup.

In response to the rejection Applicant submits herewith material indicating that, prior to the filing of the present application, it was well known to provide a code reader able to recognize the type of vehicle being tested, i.e. the communication protocol associated with different vehicle manufacturers, and to identify the monitor functions that are supported by the vehicle under test.

In support of the foregoing Applicant submits herewith material reflecting industry standards for automotive diagnostic equipment, both before and after the filing of the present application. The material dated prior to the filing of the present application, i.e. SAE J 1978 specifies that OBD Scan Tools will support "automatic hands-off determination of the communication protocol." In practice, this means that the diagnostic tool will be able to recognize the communication protocol that the vehicle under test responds to, e.g. typically one of the following five protocols which correspond to those used by leading car manufacturers:

1. ISO 9142-2
2. J1850 PWM
3. J1850 VPW
4. KWP2000 ISO 14230-4
5. CAN

As the enclosed materials reflect, the ability to automatically determine the appropriate communication protocol is not only known in the art before the filing of the patent application, but was a standardized requirement for such tools. See also the promotional materials from Vetronix Corporation dated 1999, referring to the functions of the product,

the first of which includes "automatically determines the communication protocol" (page 8).

Following the identification of the applicable communication protocols, contemporary scan tools also function to automatically poll the automobile on board electronic computing unit (ECU) to download the data representative of the functions supported by the particular ECU and the status of those functions. The documentation submitted herewith further demonstrates that the state of the art, as of the filing of the present application, also included knowledge of polling procedures to access and retrieve information in the ECU, concerning the different monitor functions that are supported by the vehicle under test.

Submitted herewith in support of the foregoing is the declaration of Keith Andreasen, reviewing the state of the prior art with respect to determining the communication protocol of the vehicle under test, and retrieving trouble codes and monitor status information. As set forth in the Andreasen declaration, and in the accompanying exhibits, as of the filing of the present application, one skilled in the art was familiar with standards used to automatically recognize the type of vehicle protocol being tested, and retrieving information representing the different monitor functions that are supported by the vehicles and their status. Accordingly, reconsideration of the rejection under 35 U.S.C. §112 is respectfully requested.

For clarification, Applicant further notes that what the prior art does not appear to recognize, and what is claimed in the present application, extends beyond simply recognizing the appropriate communication protocol and downloading vehicle status information from the ECU. The present invention departs from the prior art in that the present invention is operative to display a composite of information respecting not only trouble codes, but the monitor functions supported by the vehicle, the status of those monitor functions, and other information within a single display, in response to a single user input command, i.e. pressing the link button. As a result, the user need not be familiar with the operation of the scan tool, and need not be acquainted with user interfaces requiring the selection of different functionalities. The present invention avoids the need for repeated scrolling through menus to sequentially access and display different information retrieved by the scan tool. The present invention requires no user

interface to access or display the different types of data from the scan tool. The only scrolling that is contemplated within the present invention is to illustrate additional trouble codes that may be retrieved from the ECU.

Accordingly, while the prior art is aware of the structure and functionality of establishing appropriate communication protocols and accessing data, it does not recognize the advantageous integration of that data on to a single screen to avoid the need to manipulate the functionality of the scan tool. The present invention thus represents an enhancement of the functionality of existing scan tools, to achieve user friendly operation. As such, the present invention may be used by back yard mechanics, soccer moms and others who are unwilling or unable to dedicate the effort to become familiar with the operation of contemporary scan tools.

As understood, the contemporary devices operate to automatically determine appropriate communication protocol and poll vehicle ECU for vehicle status information. However, such information is understood to be stored in the scan tool, or some ancillary equipment, which is then accessed and displayed only after the user has progressively scrolled through multiple menus. For example, in the device set forth in U.S. Patent No. 5,541,840 to Gurne et al., it appears that that on power turn on the menu illustrated at Figure 5 appears. If vehicle diagnostics are selected from the main menu, it appears that the menu of Figure 6 then appears. Upon presentation of the menu in Figure 6, "the user can decide which controller is to be queried. Depending upon the system selected, the user is presented with a variety of options for querying the controller as to the stored diagnostic codes in monitoring operational parameters." Column 7 Lines 22-29.

While scan tools such as those disclosed in the Gurne reference may be useful in the hands of trained mechanics, and present a variety of different, programmable testing options, such devices are not commonly suitable for untrained mechanics, who have no desire to master the capabilities of such scan tools. The present invention is directed to a tool that provides the user with multiple modes of information on a single display, without the requirement that the user navigate through a user interface to access each mode of information separately. Nor does a user need to be familiar with terminology respecting different vehicle systems, or to navigate through each vehicle system in order

to assure that stored status information is identified. The advantages of the present invention are further discussed in the accompanying Declaration of Keith Andreasen.

In view of the foregoing, the application is believed to claim novel and non-obvious subject matter.

To the extent that any outstanding matters remain, Applicant would appreciate the opportunity to arrange an interview with the Examiner to review any remaining matters that are sufficient to respond to any questions the Examiner may maintain.

Should the Examiner have any questions respecting the foregoing, or should the Examiner be agreeable to address any such questions in the form of an interview, he is invited to contact Applicant's representative at the telephone number listed below.

If any additional fee is required, please charge Deposit Account Number 19-4330.

Respectfully submitted,

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